

DEPARTMENT of ENVIRONMENTAL SERVICES
Water Division - Watershed Management Bureau

LAKE TROPHIC DATA

MORPHOMETRIC:

Lake: WINNIPESAUKEE, MERED. BAY	Lake Area (ha):	18043.40
Town: MEREDITH	Maximum depth (m):	54.9
County: Belknap	Mean depth (m):	13.1
River Basin: Merrimack	Volume (m ³):	2375841000
Latitude: 43°38'08" N	Relative depth:	0.4
Longitude: 71°28'35" W	Shore configuration:	8.11
Elevation (ft): 504	Areal water load (m/yr):	2.63
Shore length (m): 386200	Flushing rate (yr ⁻¹):	0.20
Watershed area (ha): 87128.8	P retention coeff.:	---
% watershed ponded: 4.2	Lake type:	natural

BIOLOGICAL:

14 August 2001

DOM. PHYTOPLANKTON (% TOTAL)	#1	CHRYOSOPHAERELLA 75%
	#2	ASTERIONELLA 10%
	#3	DINOBYRON 4%
PHYTOPLANKTON ABUNDANCE (units/mL)		
CHLOROPHYLL-A (µg/L)		2.35
DOM. ZOOPLANKTON (% TOTAL)	#1	KERATELLA 28%
	#2	NAUPLIUS LARVA 14%
	#3	ROTIFER SPP 14%
ROTIFERS/LITER		76
MICROCRUSTACEA/LITER		31
ZOOPLANKTON ABUNDANCE (#/L)		119
VASCULAR PLANT ABUNDANCE		
SECCHI DISK TRANSPARENCY (m)		8.0
BOTTOM DISSOLVED OXYGEN (mg/L)		8.5
BACTERIA (E. coli, #/100 ml)	#1	
	#2	
	#3	

SUMMER THERMAL STRATIFICATION:

stratified

Depth of thermocline (m): 10.0
Hypolimnion volume (m³):
Anoxic volume (m³): None

CHEMICAL:Lake: WINNIPESAUKEE, MERED. BAY
Town: MEREDITH

		14 August 2001			
DEPTH (m)			3.0	11.0	20.0
pH (units)			6.9	6.8	6.5
A.N.C. (Alkalinity)			4.7	5.8	5.8
NITRATE NITROGEN			< 0.05		< 0.05
TOTAL KJELDAHL NITROGEN			0.10	< 0.10	0.10
TOTAL PHOSPHORUS			0.006	0.007	0.009
CONDUCTIVITY (μ mhos/cm)			68.8	71.8	74.7
APPARENT COLOR (cpu)			7	8	8
MAGNESIUM			0.64		
CALCIUM			3.5		
SODIUM			7.3		
POTASSIUM			0.70		
CHLORIDE			12		14
SULFATE			4		4
TN : TP			17		11
CALCITE SATURATION INDEX			3.2		

All results in mg/L unless indicated otherwise

TROPHIC CLASSIFICATION: 2001

D.O.	S.D.	PLANT	CHL	TOTAL	CLASS
0	0	0	0	0	Oligo.

COMMENTS:

1. Previously surveyed in 1979, 1984 and 1990.
2. No plant survey was conducted in 2001. Plant abundance for trophic classification is from the 1990 survey.
3. No winter samples were collected. The lake never froze solid during the winter.
4. No depth soundings were conducted. The thermocline depth is from the 2001 survey but all volume, depth and flushing rate values are based on the 1974 EPA report.

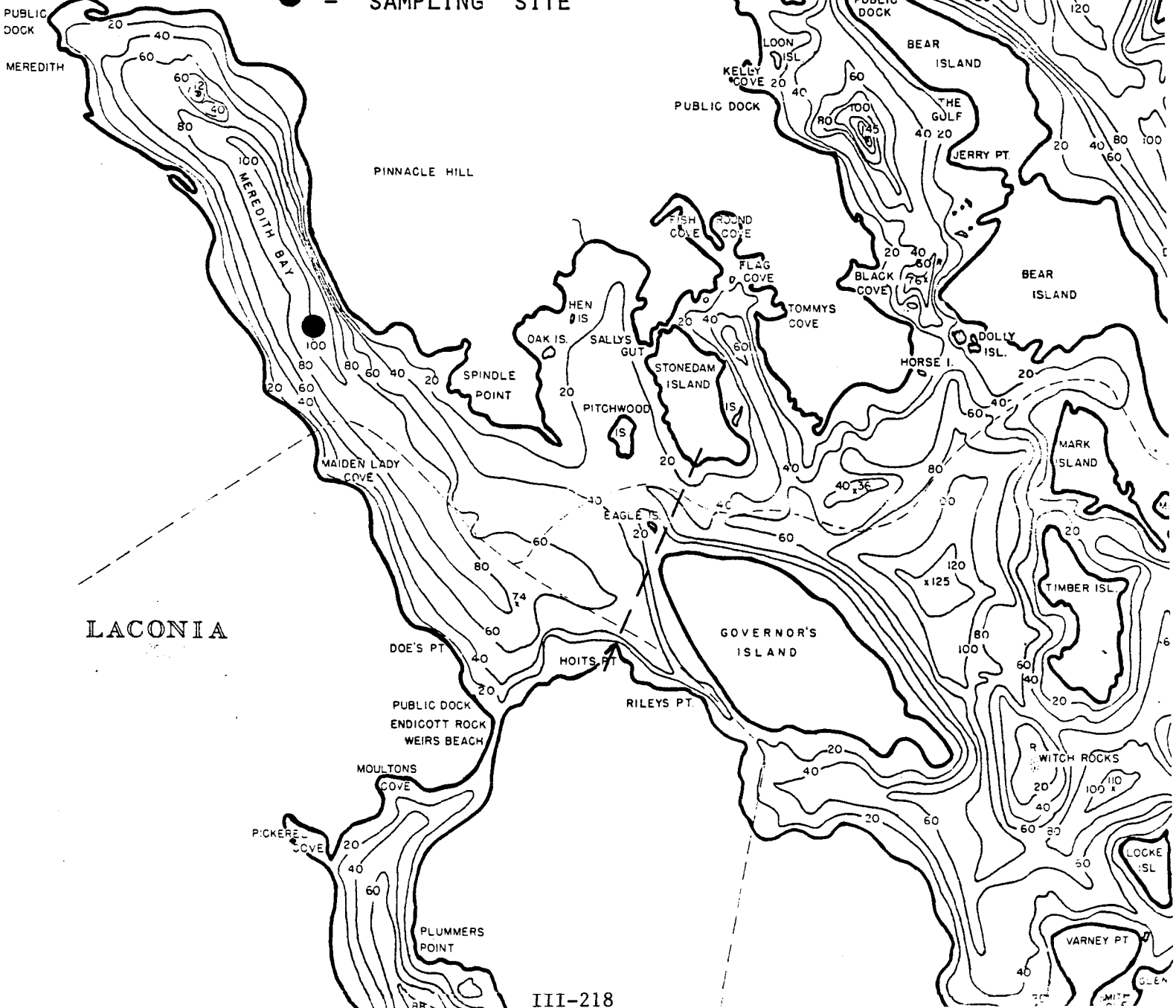
MEREDITH BAY

BATHYMETRIC CHART
&
STATION LOCATION



MEREDITH

● = SAMPLING SITE



STN 1

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